RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/726,967A
Source: IFW0
Date Processed by STIC: 12/20/04

ENTERED

IFWO

RAW SEQUENCE LISTING DATE: 12/20/2004
PATENT APPLICATION: **US/10/726,967A** TIME: 12:56:52

Input Set : **A:\Sunesis-0021.ST25.txt**
Output Set: **N:\CRF4\12202004\J726967A.raw**

```
  3 <110> APPLICANT: Ballinger, Marcus
  5 <120> TITLE OF INVENTION: Constructs for Homogenously Processed Preparations of Beta Site
  6       App-Cleaving Enzyme
  8 <130> FILE REFERENCE: 2004345-0021
 10 <140> CURRENT APPLICATION NUMBER: 10/726,967A
 11 <141> CURRENT FILING DATE: 2003-12-02
 13 <160> NUMBER OF SEQ ID NOS: 110
 15 <170> SOFTWARE: PatentIn version 3.2
 17 <210> SEQ ID NO: 1
 18 <211> LENGTH: 501
 19 <212> TYPE: PRT
 20 <213> ORGANISM: Artificial
 22 <220> FEATURE:
 23 <223> OTHER INFORMATION: Full length human BACE1 isform A
 25 <400> SEQUENCE: 1
 27 Met Ala Gln Ala Leu Pro Trp Leu Leu Leu Trp Met Gly Ala Gly Val
 28 1               5                  10                  15
 31 Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
 32            20                  25                  30
 35 Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
 36        35                  40                  45
 39 Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
 40    50                  55                  60
 43 Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
 44 65                  70                  75                  80
 47 Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
 48                 85                  90                  95
 51 Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
 52            100                 105                 110
 55 Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
 56        115                 120                 125
 59 Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
 60    130                 135                 140
 63 Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
 64 145                 150                 155                 160
 67 Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
 68                 165                 170                 175
 71 Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
 72            180                 185                 190
 75 Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Val Pro
 76        195                 200                 205
 79 Asn Leu Phe Ser Leu Gln Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
 80    210                 215                 220
```

RAW SEQUENCE LISTING DATE: 12/20/2004
PATENT APPLICATION: **US/10/726,967A** TIME: 12:56:52

Input Set : **A:\Sunesis-0021.ST25.txt**
Output Set: **N:\CRF4\12202004\J726967A.raw**

```
 83 Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
 84 225                 230                 235                 240
 87 Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
 88                 245                 250                 255
 91 Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu Ile Asn Gly Gln
 92             260                 265                 270
 95 Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
 96         275                 280                 285
 99 Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala
100     290                 295                 300
103 Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp
104 305                 310                 315                 320
107 Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr
108                 325                 330                 335
111 Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val
112             340                 345                 350
115 Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg
116         355                 360                 365
119 Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala
120     370                 375                 380
123 Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu
124 385                 390                 395                 400
127 Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala
128                 405                 410                 415
131 Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu
132             420                 425                 430
135 Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro
136         435                 440                 445
139 Gln Thr Asp Glu Ser Thr Leu Met Thr Ile Ala Tyr Val Met Ala Ala
140     450                 455                 460
143 Ile Cys Ala Leu Phe Met Leu Pro Leu Cys Leu Met Val Cys Gln Trp
144 465                 470                 475                 480
147 Arg Cys Leu Arg Cys Leu Arg Gln Gln His Asp Asp Phe Ala Asp Asp
148                 485                 490                 495
151 Ile Ser Leu Leu Lys
152             500
155 <210> SEQ ID NO: 2
156 <211> LENGTH: 10
157 <212> TYPE: PRT
158 <213> ORGANISM: Artificial
160 <220> FEATURE:
161 <223> OTHER INFORMATION: Beta secretase cleavage site of Swedish mutant of human
amyloid
162       precursor protein (APP)
164 <400> SEQUENCE: 2
166 Ser Glu Val Asn Leu Asp Ala Glu Phe Arg
167 1               5                   10
170 <210> SEQ ID NO: 3
171 <211> LENGTH: 16
172 <212> TYPE: PRT
```

RAW SEQUENCE LISTING DATE: 12/20/2004
PATENT APPLICATION: **US/10/726,967A** TIME: 12:56:52

Input Set : **A:\Sunesis-0021.ST25.txt**
Output Set: **N:\CRF4\12202004\J726967A.raw**

```
     173 <213> ORGANISM: Artificial
     175 <220> FEATURE:
     176 <223> OTHER INFORMATION: Residues 22-37 of human BACE1 preprosequence
     178 <400> SEQUENCE: 3
     180 Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser Gly Leu Gly Gly Ala
     181 1               5                  10                  15
     184 <210> SEQ ID NO: 4
     185 <211> LENGTH: 6
     186 <212> TYPE: PRT
     187 <213> ORGANISM: Artificial
     189 <220> FEATURE:
     190 <223> OTHER INFORMATION: Preferred thrombin cleavage site
     192 <400> SEQUENCE: 4
     194 Leu Val Pro Arg Gly Ser
     195 1               5
     198 <210> SEQ ID NO: 5
     199 <211> LENGTH: 7
     200 <212> TYPE: PRT
     201 <213> ORGANISM: Artificial
     203 <220> FEATURE:
     204 <223> OTHER INFORMATION: TEV protease cleavage site
     207 <220> FEATURE:
     208 <221> NAME/KEY: misc_feature
     209 <222> LOCATION: (7)..(7)
     210 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     212 <400> SEQUENCE: 5
W--> 214 Glu Asn Leu Tyr Phe Asn Xaa
     215 1               5
     218 <210> SEQ ID NO: 6
     219 <211> LENGTH: 7
     220 <212> TYPE: PRT
     221 <213> ORGANISM: Artificial
     223 <220> FEATURE:
     224 <223> OTHER INFORMATION: Preferred TEV protease cleavage site
     226 <400> SEQUENCE: 6
     228 Glu Asn Leu Tyr Phe Asn Gly
     229 1               5
     232 <210> SEQ ID NO: 7
     233 <211> LENGTH: 7
     234 <212> TYPE: PRT
     235 <213> ORGANISM: Artificial
     237 <220> FEATURE:
     238 <223> OTHER INFORMATION: Preferred TEV protease cleavage site
     240 <400> SEQUENCE: 7
     242 Glu Asn Leu Tyr Phe Asn Ala
     243 1               5
     246 <210> SEQ ID NO: 8
     247 <211> LENGTH: 5
     248 <212> TYPE: PRT
```

RAW SEQUENCE LISTING DATE: 12/20/2004
PATENT APPLICATION: **US/10/726,967A** TIME: 12:56:52

Input Set : **A:\Sunesis-0021.ST25.txt**
Output Set: **N:\CRF4\12202004\J726967A.raw**

249 <213> ORGANISM: Artificial
251 <220> FEATURE:
252 <223> OTHER INFORMATION: Genenase I cleavage site
255 <220> FEATURE:
256 <221> NAME/KEY: misc_feature
257 <222> LOCATION: (2)..(2)
258 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
260 <400> SEQUENCE: 8
W--> **262 Ala Xaa His Tyr Ala**
263 1 5
266 <210> SEQ ID NO: 9
267 <211> LENGTH: 5
268 <212> TYPE: PRT
269 <213> ORGANISM: Artificial
271 <220> FEATURE:
272 <223> OTHER INFORMATION: Genenase I cleavage site
275 <220> FEATURE:
276 <221> NAME/KEY: misc_feature
277 <222> LOCATION: (2)..(2)
278 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
280 <400> SEQUENCE: 9
W--> **282 Ala Xaa His Phe Ala**
283 1 5
286 <210> SEQ ID NO: 10
287 <211> LENGTH: 5
288 <212> TYPE: PRT
289 <213> ORGANISM: Artificial
291 <220> FEATURE:
292 <223> OTHER INFORMATION: Genenase I cleavage site
295 <220> FEATURE:
296 <221> NAME/KEY: misc_feature
297 <222> LOCATION: (2)..(2)
298 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
300 <400> SEQUENCE: 10
W--> **302 Ala Xaa His Leu Ala**
303 1 5
306 <210> SEQ ID NO: 11
307 <211> LENGTH: 5
308 <212> TYPE: PRT
309 <213> ORGANISM: Artificial
311 <220> FEATURE:
312 <223> OTHER INFORMATION: Genenase I cleavage site
315 <220> FEATURE:
316 <221> NAME/KEY: misc_feature
317 <222> LOCATION: (2)..(2)
318 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
320 <400> SEQUENCE: 11
W--> **322 Phe Xaa His Tyr Ala**
323 1 5

RAW SEQUENCE LISTING DATE: 12/20/2004
PATENT APPLICATION: **US/10/726,967A** TIME: 12:56:52

Input Set : **A:\Sunesis-0021.ST25.txt**
Output Set: **N:\CRF4\12202004\J726967A.raw**

```
     326 <210> SEQ ID NO: 12
     327 <211> LENGTH: 5
     328 <212> TYPE: PRT
     329 <213> ORGANISM: Artificial
     331 <220> FEATURE:
     332 <223> OTHER INFORMATION: Genenase I cleavage site
     335 <220> FEATURE:
     336 <221> NAME/KEY: misc_feature
     337 <222> LOCATION: (2)..(2)
     338 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     340 <400> SEQUENCE: 12
W--> 342 Phe Xaa His Phe Ala
     343 1               5
     346 <210> SEQ ID NO: 13
     347 <211> LENGTH: 5
     348 <212> TYPE: PRT
     349 <213> ORGANISM: Artificial
     351 <220> FEATURE:
     352 <223> OTHER INFORMATION: Genenase I cleavage site
     355 <220> FEATURE:
     356 <221> NAME/KEY: misc_feature
     357 <222> LOCATION: (2)..(2)
     358 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     360 <400> SEQUENCE: 13
W--> 362 Phe Xaa His Leu Ala
     363 1               5
     366 <210> SEQ ID NO: 14
     367 <211> LENGTH: 5
     368 <212> TYPE: PRT
     369 <213> ORGANISM: Artificial
     371 <220> FEATURE:
     372 <223> OTHER INFORMATION: Genenase I cleavage site
     375 <220> FEATURE:
     376 <221> NAME/KEY: misc_feature
     377 <222> LOCATION: (2)..(2)
     378 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
     380 <400> SEQUENCE: 14
W--> 382 Leu Xaa His Tyr Ala
     383 1               5
     386 <210> SEQ ID NO: 15
     387 <211> LENGTH: 5
     388 <212> TYPE: PRT
     389 <213> ORGANISM: Artificial
     391 <220> FEATURE:
     392 <223> OTHER INFORMATION: Genenase I cleavage site
     395 <220> FEATURE:
     396 <221> NAME/KEY: misc_feature
     397 <222> LOCATION: (2)..(2)
     398 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 12/20/2004
PATENT APPLICATION: US/10/726,967A TIME: 12:56:53

Input Set : A:\Sunesis-0021.ST25.txt
Output Set: N:\CRF4\12202004\J726967A.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; Xaa Pos. 7
Seq#:8; Xaa Pos. 2
Seq#:9; Xaa Pos. 2
Seq#:10; Xaa Pos. 2
Seq#:11; Xaa Pos. 2
Seq#:12; Xaa Pos. 2
Seq#:13; Xaa Pos. 2
Seq#:14; Xaa Pos. 2
Seq#:15; Xaa Pos. 2
Seq#:16; Xaa Pos. 2
Seq#:17; Xaa Pos. 2
Seq#:18; Xaa Pos. 2
Seq#:19; Xaa Pos. 2
Seq#:37; Xaa Pos. 3,5
Seq#:38; Xaa Pos. 3,5
Seq#:39; Xaa Pos. 3,5
Seq#:40; Xaa Pos. 3,5
Seq#:41; Xaa Pos. 3,5
Seq#:42; Xaa Pos. 3,5
Seq#:43; Xaa Pos. 3,5
Seq#:44; Xaa Pos. 3,5
Seq#:45; Xaa Pos. 3,5
Seq#:46; Xaa Pos. 3,5
Seq#:47; Xaa Pos. 3,5
Seq#:48; Xaa Pos. 3,5

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27
Seq#:28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51
Seq#:52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75
Seq#:76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99
Seq#:100,101,102,103,104,105,106,107,108,109,110

VERIFICATION SUMMARY DATE: 12/20/2004
PATENT APPLICATION: **US/10/726,967A** TIME: 12:56:53

Input Set : **A:\Sunesis-0021.ST25.txt**
Output Set: **N:\CRF4\12202004\J726967A.raw**

L:214 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:262 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:282 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:302 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
L:342 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
L:402 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:422 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:442 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:462 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:482 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:745 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0
L:770 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:0
L:795 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:0
L:820 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0
L:845 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
L:870 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0
L:895 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
L:920 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0
L:945 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:0
L:970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:0
L:995 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47 after pos.:0
L:1020 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:0